muscle sense with its resulting ataxia. These are symptoms of a defect in the deep sensations, and the direct consequence of lesions in the posterior tracts. At the same time there are many other symptoms that become evident in a fully developed case of tabes which are more or less due to disturbances of the superficial sensations; it is impossible to picture a break in the working of the deeper sensations without the involvement of the superficial also. The disturbances of the deep sensations are, however, of more importance than the others and precede them.

Typhoid Meningitis.—E. E. SOUTHARD and E. F. RICHARDS (*Jour. Med. Research*, 1908, xix, 513) report the case of a man, aged thirty-two years, who died after an acute illness of one week. There was no history of previous typhoid fever. The patient had had lues at nineteen, gradually advancing tabes at twenty-eight, and the signs of general paresis at thirty. At autopsy the findings were those of a hypostatic pneumonia, acute cerebrospinal leptomeningitis, and enlargement of the mesenteric lymph nodes; there were no lesions corresponding to a typhoid infection in the intestine. A pure culture of Bacillus typhosus was obtained from the meningeal pus and the large mesenteric glands, but blood cultures failed to yield the same organism. The meningeal exudate contained polynuclear leukocytes in great numbers, suggesting the hypothesis that Bacillus typhosus in the meninges may exert a directly pyogenic action. Should this hypothesis be upheld the indications are that the typhoid bacillus may have two separate effects: the one produced by diffusible toxin characteristically in the intestinal tract, and the other produced in the meninges either by the direct local action of the bacilli or through an endotoxin due to destruction of the bacilli. Experimentally, Southard and Richards found that Bacillus typhosus inflamed the meninges of guinea-pigs, the exudates showing many polynuclear leukocytes, mononuclears appearing only about seven days after inoculation. Further research is desirable to determine whether the local action of Bacillus typhosus in the meninges is or is not of an endotoxic type.

Palliative Treatment of Elephantiasis.—ALDO CASTELLANI (*Philippine Jour. of Science*, 1908, iii, 311) has been experimenting for some time with injections of various antiseptics, with the idea of destroying the organism which causes this disease (such drugs as methylene blue, bichloride of mercury, carbolic acid, various arsenical compounds, cacodylate of sodium, quinine, and others). All of these were of little use. Then Castellani used theosinamin on account of its power of softening various kinds of fibrous tissue. As the injections of theosinamin are very painful Castellani used "fibrolysin," which is a water-soluble combination of theosinamin with sodium salicylate, 2 c.c. corresponding to 0.2 grams of theosinamin. This dose is given daily or every other day according to the case. At the same time rest, massage, and, most important of all, proper systemic pressure by means of bandages which are necessary adjuncts. Later surgical measures can be resorted to for the removal of the redundant skin. This method the authors found of great use in a certain number of suitable cases. As yet he has found no definite explanation for the action of theosinamin. It was noted, however, that in some cases following the injection there was a fairly well-marked, though transient, leukocytosis. It is to be noted that the treatment without a constant well-distributed pressure on the affected parts by bandaging does not cause any marked improvement, and that vice versa the pressure alone without the theosinamin injections has practically no effect in the severe chronic cases.

The Treatment of Thyroidism by a Specific Cytotoxic Serum.—JOHN ROGERS and S. P. BEEBE (*Archives of Internal Medicine*, 1908, ii, 297), in their latest report on the use of a specific serum in cases of thyroidism, review their former work on the subject go especially into the nature of the serum, and conclude that the serum has a specific effect in neutralizing the toxic action of the thyroid secretion. As a therapeutic agent it gives results which cannot in many cases be obtained by any other medical means. Not all cases presenting symptoms of thyroidism can be treated successfully with serum, because not all cases are purely hypertrophic in origin. The rapid amelioration of symptoms in acute toxic cases similar in most respects to the well-accepted instances of neutralization of toxin by antitoxin, is a weighty argument in favor of believing the symptoms to be due to the toxic agents of hyperthyroidism. The beneficial effects of combined treatment (administration of both the antiserum and the pure thyroid proteid, $\frac{1}{80}$ grain of thyroid proteid thrice daily and the injection of 5 minims of the serum every fifth day), gives the best results, and indicates a dysthyroidism as well as a hyperthyroidism as a factor in the production of symptoms.

SURGERY.

UNDER THE CHARGE OF

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Concerning Changes in the Blood after Operations.—BOLOGNESI (*Zentrbl. f. Chir.*, 1908, xxxv, 1457) says that for some time investigations have been made in the surgical clinic in Modena concerning changes in the blood following operations. In recent years he found by experiments on animals that a change occurred in the protein substance of the blood serum, in infections by the pyogenes communis. He decided to investigate whether any noteworthy changes occurred in simple operations done under careful asepsis, where the microbes were not acting and no narcosis was employed. When in small dogs various operations were performed and the blood serum of the animals, taken at various periods (three to eight days) after the operation, was treated with a 1 to 2000 solution of salicylic acid, in the proportion of 10 to 50, and this was